ACE7155F

PFM Step-Up DC-DC Controller IC

Description

The ACE7155F is a simple, compact PFM boost controller designed for applications where extremely low cost and small size are top priorities. The output voltage is fixed at 5V with 1% accuracy from an input voltage range of 2.7V to 5.5V.

Low current consumption of 32uA typical makes ACE7155F ideal for battery-powered applications. The ACE7155F is designed specifically to provide a simple application circuit and minimize the size and number of external components, making them ideal for consumer electronics applications.

The ACE7155F adopts PFM operating mode, which provides excellent efficiency over a wide-range of input voltage and load currents. The on-time and off-time are tuned to permit optimization of external component size.

Features

- Operating voltage range：2.7V to 5.5V
- Low Operating Current: 32uA@5V
- Fixed Output Voltage of 5V
- High Output voltage accuracy：±1%
- No Feedback Resistor needed
- Output Voltage can be adjusted upwards with External Resistor
- Output Power: up to 35W
- High Efficiency: up to 94%
- Chip Enable Input
- Operating Temperature Range -40°C to 85°C
- Available in SOT23-6
- Pb-free, ROHS-Compliant and Halogen-free

Application

- Hand-held Devices
- Power Bank
- Medical Equipment
- Charger

Absolute Maximum Ratings

Parameter	Value
Terminal Voltage (With respect to GND) VIN	-0.3V to 6.5V
VOUT Voltage	-0.3V to 18V
DRV and CE voltage	0.3V to VIN
Lead Temperature (Soldering)	260℃
Operating Temperature	-40°C to 85°C
Thermal Resistance	300℃/W
Maximum Junction Temperature	150℃
Storage Temperature	-65°C to 150°C

Stresses beyond those listed under 'Absolute Maximum Ratings' may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions above those indicated in the operational sections of the specifications is not implied. Exposure to Absolute Maximum Rating Conditions for extended periods may affect device reliability.

Ordering Information

ACE7155F XX + H

- XX: GM: SOT23-6
- Pb: Pb - free
- H: Halogen - free

Notes

ACE does not assume any responsibility for use as critical components in life support devices or systems without the express written approval of the president and general counsel of ACE Technology Co., LTD. As sued herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and shoes failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.